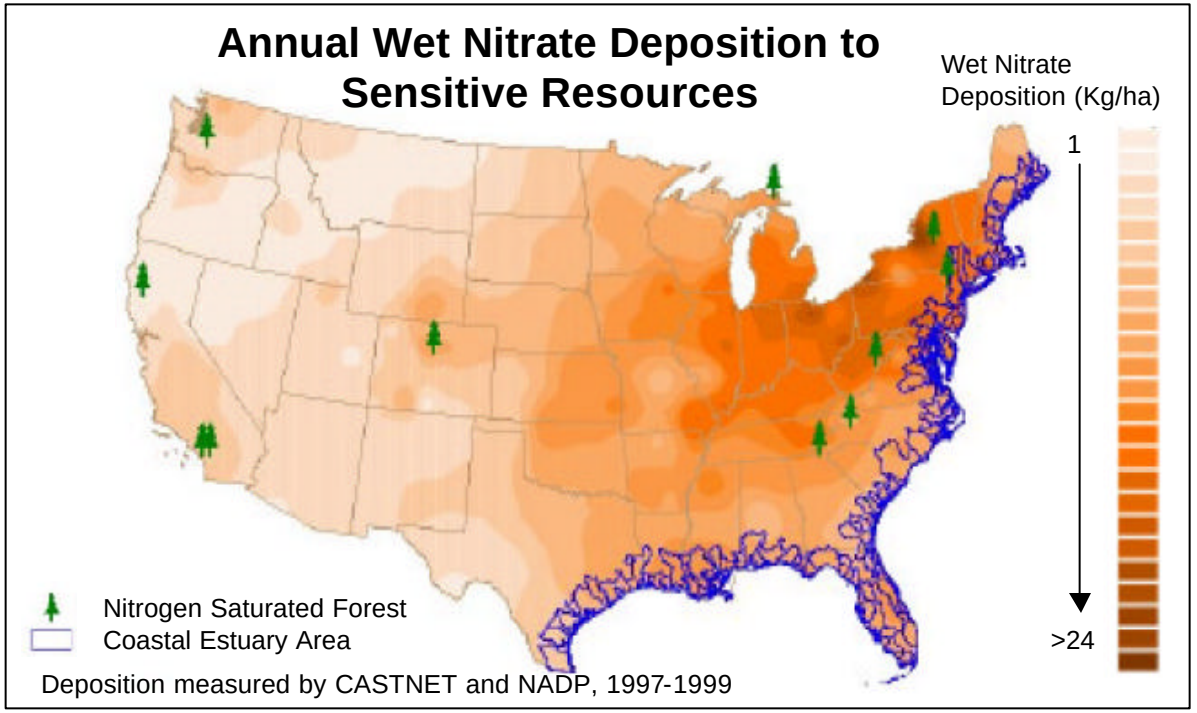
Nitrogen Deposition Can Harm Forests and Coastal Ecosystems

- Nitrogen deposition occurs when nitrogen in deposited to the Earth's surface.
- Power plant NOx emissions are a significant source of the nitrogen that reaches our coastal ecosystems and sensitive forests. When nitrogen levels in these ecosystems are too high, problems develop.
- **Coastal ecosystems:** 10 to 40 percent of the nitrogen reaching many East and Gulf coast estuaries comes from the air.
- Too much nitrogen in these waters leads to a condition known as "eutrophication."
- Two-thirds of U.S. estuaries (more than 80 estuaries) show symptoms of moderate to high eutrophication.
- Eutrophication can result in:
  - Fish and shellfish "kills" due to low levels of dissolved oxygen
  - Algal blooms, including toxic red and brown tides;
  - Loss of important habitat, such as seagrass beds and coral reefs;
  - Changes in marine biodiversity and species distribution; and
  - Economic and social impacts resulting from a loss of fisheries and tourism



Sensitive Forests

- High nitrogen deposition can cause "**nitrogen saturation,**" which occurs when too much nitrogen enters sensitive forest soils and begins to leach out, stripping soil nutrients and affecting water quality.
- Sensitive forests showing signs of nitrogen saturation are found in the eastern and western U.S. and include the Great Smoky Mountains, Adironack/Catskill Mountains, the Colorado Front Range and southern California.